

ABSTRACT OF THE DISCLOSURE

A method for depositing a low k dielectric film comprising silicon, carbon, and nitrogen is provided. The low k dielectric film is formed by a gas mixture comprising a silicon source, a carbon source, and $\text{NR}_1\text{R}_2\text{R}_3$, wherein R_1 , R_2 , and R_3 are selected from the group consisting of alkyl and phenyl groups. The low k dielectric film may be used as a barrier layer, an etch stop, an anti-reflective coating, or a hard mask.

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